

**SUMMARY OF REVISIONS FOR JANUARY, 2006
STANDARD SPECIFICATIONS
DEPARTMENT of TRANSPORTATION**

**New Brunswick
Nouveau Brunswick**

INTRODUCTION

DIVISION 000

Item 002 - Abbreviations

002.1.1

added the following under Organizations:

- DFO Department of Fisheries and Oceans

revised/added the following under Terms:

- added CAP Corrugated Aluminum Alloy Pipe
- added CE Common Excavation
- revised CSP Aluminum Coated Corrugated Steel Pipe
- revised CSPA Aluminum Corrugated Steel Pipe-Arch
- revised EPP ~~DOT~~ Environmental Protection Plan
- revised RAP Reclaimed Asphalt ~~Concrete~~ Pavement
- revised SPCAP Structural Plate Corrugated Aluminium Alloy Pipe
- revised SPCSP Structural Plate Aluminum Coated Corrugated Steel Pipe
- revised SPCAPA Structural Plate Corrugated Aluminium Alloy Pipe-Arch
- revised SPCSPA Structural Plate Aluminum Coated Corrugated Steel Pipe-Arch
- added SRE Solid Rock Excavation
- added UNE Unclassified Excavation
- added WATCM Work Area Traffic Control Manual (DOT)

0002.2

revised heading as follows: PUBLICATIONS AND REGULATIONS.

002.2.1

revised article as follows: When publications or regulations are referred to, the reference is to the latest ~~publication~~ version available at the time of the signing of the Contract.

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Item 101 - Clearing

- 101.4.2 revised/added articles as follows: All Merchantable Timber shall be salvaged, such that no big tops (containing a merchantable bolt) are left.
- .1 Salvaged material shall become the property of the Contractor and shall be removed from the Work Site before the Completion Date of the Contract.
 - .2 Loads of wood transported from clearing operations within the Contract ROW shall require a Transportation Certificate (TC) titled "Crown Land Harvest Permit".
 - .3 For the purposes of filling out the TC, "Other" (in the top right of the form) shall be "DOT ROW", and "Harvest Block No." shall be the Contract number.
- 101.4.4 revised/added articles as follows: All merchantable trees, and all nonmerchantable trees except as noted in 101.4.6.2, shall be cut so that stump height is not greater than 0.5 m above average ground level.
- .1 Nonmerchantable trees, instead of being cut and felled, may be shredded in place using equipment designed for that purpose, but shall not be bulldozed down.
 - .2 The Contractor shall avoid long skids of timber on steep slopes adjacent to watercourses, and felling or skidding trees across a watercourse.
 - .3 The Contractor shall limit use of heavy Equipment for clearing within 10 m of stream banks and, to the extent possible, shall do cutting therein by hand or by Equipment able to "reach in" to cut and yard out the timber.
 - .4 The Contractor shall minimize ground disturbance to minimize the potential for erosion and sedimentation of watercourses and wetlands.
 - .5 Directional hand felling and harvesting shall be used where ground conditions are not suitable for access by heavy Equipment. When cable skidders are used, every effort shall be made to avoid rutting soft ground areas by utilizing the full range of the cables.
- 101.4.5 deleted the "or by burning" option from the article.
- 101.4.6 deleted the "or by burning" option from the article.
- 101.4.6.4 revised article as follows: Notwithstanding 101.4.6.2 to 106.4.6.3, all nonmerchantable trees, brush and slash shall be disposed of such that the Engineer can set and grade centreline stakes; set toe-of-slope stakes in areas of fills over 5 m in height to Subgrade; and do cross-sections in areas as described in 102.4.4.

Item 102 - Grubbing

- 102.4.6 deleted the "by burning" option from the article.
- 102.4.6.2 revised article as follows: Where Roadbed fills are greater than exceed 6 m in height to Subgrade, the materials may be placed Contractor may place one layer of grubbed materials either on the existing ground, or on the first lift of compacted excavated material or Borrow tramped and shall tramp the materials to a 0.6 m thickness as described in 102.4.6.1.

Item 106 - Common Excavation

- 106.4.1.6.1 added to the article the requirement to moisture condition.
- 106.4.2.8 deleted portion of article already handled by Note 2 on Standard Drawing 106-1 as follows: Where common material is underlain by a deep bedrock cut, the material at the top of the bedrock Backslopes shall be shaped as indicated on Standard Drawing 106-1, ~~before the bedrock cut is excavated beyond a depth that will allow safe and practical access near the edge of the bedrock Slope.~~
- 106.4.3.4 revised articles as follows: Material placed to within 600 mm below Subgrade shall have a maximum lift thickness of 300 mm.
- .1 The lift thickness may be increased to a maximum of 600 mm if the Contractor can provide proof that the specified density can be achieved throughout the entire lift.
- 106.4.3.5 revised articles as follows: Material placed in the top 600 mm of the Subgrade shall meet the requirements of 121.2 - Borrow A and shall be placed as specified in 106.4.3.4.
- .1 In backfilling of undercuts deeper than 600 mm, the lift thicknesses shall be as determined by the Engineer.
- 106.6.1 revised article to include a separate Unit Price for each type of common excavation.
- 106.6.3 added article as follows: Except as indicated in 106.6.2 overhaul will not be paid for material removed under this Item and used under other Items.

Item 107 - Unclassified Excavation

- 107.4.3 added article as follows: The Contractor shall construct offtakes and stream diversion channels as identified and/or detailed in the Contract Documents.
- 107.6.1 revised article to include a separate Unit Price for each type of common excavation.
- 107.6.3 added article as follows: Except as indicated in 107.6.2 overhaul will not be paid for material removed under this Item and used under other Items.

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Item 108 - Solid Rock Excavation

- 108.4.1.7 revised/added article as follows: Blasting will be permitted only between 30 minutes after sunrise and 30 minutes before sunset.
- .1 Blasting within 500 m of any residence or business will not be permitted to take place between 7:00 p.m. and 7:00 a.m. Monday to Friday, or on any weekend or public holiday, without prior notification to and approval by the Engineer.
- 108.6.1 revised article to include a separate Unit Price for each type of solid rock excavation.
- 108.6.3 added article as follows: Except as indicated in 108.6.2 overhaul will not be paid for material removed under this Item and used under other Items.

Item 121 - Borrow

- 121.2 note that article 121.2.4 of the 2003 Book which indicated the Owner maintains records of field and Laboratory testing results for known Borrow sources... has been deleted, these records are not kept by DOT, records are kept only for known aggregate sources.
- 121.2.2.1 added article as follows: Dust content will be determined in accordance with ASTM C117.
- 121.2.2.2 revised/added article as follows: Borrow A shall have a Dust content not exceeding 25% tested at a minimum frequency of one test per 10,000 t.
- .1 If successive test results indicate a Dust content below 15% the test frequency may be reduced at the discretion of the Engineer.
- 121.2.2.3 revised article as follows: Mudstone, claystone and/or siltstone, ~~and any otherwise acceptable rock mixed with such materials or with clayey or silty soil,~~ will not be acceptable as Borrow A.
- 121.2.2.4 added article as follows: Borrow A shall have a maximum Plasticity Index of 5.
- 121.4.9.1 revised articles as follows: Material placed in the top 600 mm to Subgrade shall meet the requirements of 121.2 - Borrow A and shall be placed, as follows:
- .1 Soil Borrow A shall be placed as specified in 121.4.9.2.1.
- .2 Rock Borrow A shall be placed in one lift using a vibratory roller of at least 11 t mass. Surface voids shall be filled with rock fragments and spalls and compacted such that rock fragments are further broken down or repositioned to minimize voids and bridging, and to consolidate the lift.
- .3 In backfilling of undercuts deeper than 600 mm, the lift thickness shall be as determined by the Engineer.

- 121.4.9.2.1 revised articles as follows: Soil Borrow shall have a maximum lift thickness of 300 mm, and each lift shall be compacted to a minimum of 95% of the maximum dry density.
- .1 The lift thickness may be increased to a maximum of 600 mm if the Contractor can provide proof that the specified density can be achieved throughout the entire lift.

Item 130 - Metal Pipe

- 130.1 description revised to correspond to DOT normal practice of specifying aluminium coated corrugated pipe or corrugated aluminium alloy pipe.
- 130.2.2 revised to reference new Table 130-1 which indicates the material and fabrication standards for the type of specified pipe.
- Table 130-2 revised to correspond to DOT normal practice of specifying aluminium coated corrugated pipe or corrugated aluminium alloy pipe.
- 130.2.3 revised to specify aluminium couplers rather than galvanized.
- Table 130-3 added CAP to the title of the table.
- 130.2.5 added article as follows: All cut edges and any damage to aluminum coatings shall be ground smooth and recoated in accordance with CSA G401.
- 130.3.1.1 added article as follows: If fish weirs/baffles are specified for a Culvert, the Contractor shall submit shop drawings for each Culvert in accordance with 131.3.
- 130.4.2 added article as follows: If fish weirs/baffles are specified for a Culvert, the hook bolts shall be isolated from the reinforcement.
- 130.6.2 added articles as follows: The Owner will make partial payment in accordance with 908.7 for metal pipe stored at the Work Site.
- .1 Partial payment will be made for specialized metal pipe acceptably stored at the supplier's yard.

Item 131 - Metal Pipe - Large (Note change in Title)

- 131.1.1 description revised to correspond to DOT normal practice of specifying aluminium coated corrugated pipe or corrugated aluminium alloy pipe.
- 131.2.2 revised to reference new Table 131-1 which indicates the material and fabrication standards for the type of specified pipe.
- 131.2.4 added article as follows: All cut edges and any damage to aluminum coatings or galvanized steel shall be ground smooth and recoated in accordance with CSA G401.
- 131.6.2 added article as follows: The Owner will make partial payment for metal pipe in accordance with 908.7.

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Item 140 - Concrete Pipe

- 140.6.2 added articles as follows: The Owner will make partial payment in accordance with 908.7 for reinforced concrete pipe stored at the Work Site.
- .1 Partial payment will be made for specialized reinforced concrete pipe acceptably stored at the supplier's yard.

Item 141 - Concrete Pipe - Large (Note change in Title)

- 141.2.4 revised article specifying that the supply of gaskets is required for all pipes as follows: All pipes shall be supplied with gaskets (confined "O" ring with lubricant, or single offset type).
- 141.3.1.5 added article as follows: Details of reinforcing steel for each individual cage shall include wire sizes for cages and stirrups, and reinforcement for weirs and baffles.
- 141.3.1.6 added article as follows: Compressive strength of concrete.
- 141.3.3 added article as follows: The proposed mix proportions (design), shall be submitted to the Engineer for review at least 14 Days before concrete production is due to start.
- 141.4.2 added article as follows: Concrete cover for pipe reinforcing steel shall be 25 mm \pm 6 mm.
- 141.4.3 added article as follows: The Contractor shall ensure that the manufacturer notifies the Engineer at least 5 Days in advance of commencing any phase of the manufacture to allow for scheduling the DOT inspection.
- 141.4.4 added article as follows: The manufacturer shall ensure that safe working conditions exist for the Engineer.
- 141.4.5.4 added article as follows: In the event of disagreement between the manufacturer/supplier and the Owner in verification of the 0.3 mm crack on a Culvert section being tested, that section shall be D-loaded to its failure.
- 141.4.11 revised article as follow: The maximum joint gap between any two concrete pipe sections shall be 13 mm for pipes less than 1800 mm in diameter, and 20 mm for pipes 1800 mm and over in diameter.
- 141.6.2 added article as follows: The Owner will make partial payment for reinforced concrete pipe in accordance with 908.7.

Item 142 - Precast Concrete Box Culvert

- 142.3.1.6 revised article adding the requirement for the submittal of the type of inserts and lift anchors.

- 142.4.1.2.1 the minimum concrete cover has been revised as follows: The reinforcement shall have a minimum concrete cover of 50 mm or a minimum concrete cover of 75 mm for a marine environment. A minimum concrete cover of 13 mm is required for the ends of longitudinal steel.
- 142.4.1.6 revised article as follows: Shop drawings may show a design with wall and slab thicknesses may be manufactured different from those on the Plans, but the inside dimensions (ID) of the span and the rise shall not be less than those so indicated.
- 142.6.2 added article as follows: The Owner will make partial payment for precast concrete box Culvert in accordance with 908.7.

Item 161 - Foundation Excavation

- 161.1.1 revised article indicating the options (specified/detailed in 161.4.9) for the placement of materials within the Work Site or disposal outside the Work Site as follows: This Item consists of excavation necessary for the construction and/or removal of Structures, and placement of materials within the Work Site, or disposal outside the Work Site.
- 161.4.14 added article as follows: The bottom of the foundation excavation for footings founded on solid rock shall be cleaned of all loose rock and soil.

Item 167 - Backfill For Structures

- 167.6.2 article revised as follows: Haulage for backfill, as approved by the Engineer, will be paid for in accordance with Item 801.

Item 169 - Induced Trench

- Table 169-1 added Expanded Polystyrene to the table and the requirement to cut the strings on baled hay or straw.
- 169.4.3.2 revised the tolerance on the width as follows: The excavation shall have a tolerance of ± 20 mm in depth and a tolerance of $\pm 10\%$ in width on each side.

Item 181 - Page Wire Fence

Deleted from Book; sent to Design Library.

Item 182 - Chain Link Fence

- 182.4.5 revised article as follows: All posts installed in soil shall be centred and vertically embedded in the concrete placed in a concrete form tube forming the boundary of the excavated hole formed by augering.

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Item 183 - Barbed Wire Fence

Deleted from Book; sent to Design Library.

Item 191 - Application of Water

191.6.1 revised article to include a separate Unit Price for each type of water application.

Item 199 - Standard Drawings

S.D. 161-1 to 161-5 revised note pointing to shaded backfill area clarifying that backfill is paid if the pipe is installed under Items 131 or 141 however, the backfill is not paid for if pipe is installed under Items 130 or 140.

A requirement has been added to lightly compact backfill (85% ASTM D698) under the invert of the pipe for 1/3 D.

S.D. 182-2 revised note on footing detail to reference S.D. 182-1 rather than 181-1.

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Item 201 - Production of Highway Aggregates

- 201.2.1.4 added article corresponding with DOT policy as follows: The Owner maintains records of field and Laboratory testing results for known Highway aggregate sources located throughout the province and these records are available for viewing, in accordance with Item 926, at the Owner's offices located in the Soils and Mineral Building, 975 College Hill Road, Fredericton, NB, during normal business hours.
- Table 201-1 added Micro-Deval (MTO LS-619) test method/values (max.) for Blending Material for Aggregate Base and Blending Material for Aggregate Subbase/Shoulder Material. Under Plasticity Index, Blending Material has been included with Aggregate Base and Subbase and each Aggregate Type has been separated specifying different plasticity index values. The maximum allowable plasticity index for Aggregate Base has been revised to 5 from 3, Aggregate Subbase remains at 5.
- 201.2.3.5 decreased the maximum Dust content to 20% from 25% and added that the Dust content will be determined in accordance with ASTM C117.
- 201.2.3.5.1 added article replacing the liquid limit requirement as follows: The blending materials shall individually meet the Micro-Deval and Plasticity Index requirements in Table 201-1.
- 201.2.4.2.2 replaced test method with ASTM D5821 rather than the MTO LS607.
- 201.4.1.3 added article to address field conditions of aggregates which require that the Contractor carry out specified changes in location or source to meet physical property requirements of Table 201-1.
- 201.4.6.1 revised article clarifying that the crushed product will be monitored for gradation.

Item 203 - Aggregate Base/Subbase

- 203.4.2.4.1 revised the lift thickness requirement for Aggregate Subbase restricting the lift thickness to a maximum of 300mm.

Item 204 - Shoulder Material

- 204.4.4.5.1 revised article specifying the RAP maximum density shall be determined by a test strip rather than a rolling pattern. The test strip procedure is detailed in 936.2.7.

Item 205 - Fine Grading

- 205.4.2 added to article "and/or to grades, slopes, dimensions and tolerances as directed by the Engineer".

Item 208 - Cold Milling - Asphalt Concrete

- 208.4.3.2 revised article specifying the construction of a 1.5 m long taper rather than the construction of a taper to a slope of 25:1 minimum.
- 208.4.5 added to the article "as determined by the Engineer".
- 208.4.9 revised article as follows: The Contractor shall continuously maintain the Work Site free of potholes and standing water and in a condition providing for the safe and efficient flow of traffic, from the time of removal, until such time as the new asphalt concrete is placed.
- 208.4.9.1 added article as follows: Hot mixed asphalt concrete shall be placed in the potholes, cold mix or RAP are only acceptable as a temporary repair.

Item 259 - Bituminous Tack Coat

- 259.1.1 revised the article deleting the words, "or Portland cement concrete".
- 259.2.2 added to the article specifying CSS-1 emulsion is an option which can be applied when temperature and curing times are applicable.
- 259.4.7 added to the article specifying CSS-1 emulsion is an option which can be diluted and applied when temperature and curing times are applicable.

Item 260 - Asphalt Concrete

- This Item has been rearranged/renumbered and revised to incorporate Superpave Mix Design. EASLs dictate the asphalt concrete mix design and there is no longer any differentiation for Type I or Type II Highways. Specifications for continuous mix plants have been deleted and additional requirements have been added for batch and drum mix plants. The other significant revisions are identified as follows:

260.2.1.1.3 revised article as follows: Performance Grade (PG) asphalt binder shall meet the requirements of AASHTO MP1-98 M320, Table 1 - Performance Graded Asphalt Binder Specification.

260.2.1.1.5 revised/added article as follows: The Contractor shall provide one sample of asphalt binder sample per ~~3000~~ 5000 t of asphalt concrete mix production, taken in accordance with ASTM D140 from the Contractor's asphalt binder storage tank(s).

.1 If the tendered Quantity of asphalt concrete exceeds 1000 t the Contractor shall provide a minimum of one binder sample.

260.2.1.5.3 revised article limiting the maximum mass of blending sand to be used in the total asphalt concrete mix to less than 10% of the total mass for all highways.

Table 260-4 added Travcor 4505 to the approved anti-stripping admixtures.

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- 260.2.2.1.2.1 added articles as follows: The fine aggregate used in surface mixes may be allowed an extra one percent passing the 75µm sieve at the discretion of the Engineer.
- .1 A request by the Contractor shall be submitted in writing to the Engineer.
- Table 260-5 revised the fine aggregate percent passing the 75 µm for C and D mixes to a max. of 7.0% rather than a max. of 8.0%.
- 260.2.3.2.1.1 revised article deleting the % of RAP by total weight of the combined materials, the % will be specified in the Contract Documents.
- 260.2.3.3.1.1 revised to one requirement the amount of aggregates to be stockpiled prior to sampling for DMF as follows: At least 50% of each aggregate type, for the current years production, is produced and in stockpile.
- Table 260-8 revised the percent passing the 75 µm for Type C and D to 2.0 - 6.0 rather than 2.0 - 7.0.
- 260.4.2.4.1 revised as follows: Tanks for storage of asphalt binder shall be capable of heating the material and maintaining it within the range of ~~not less than 115°C and not greater than 165°C~~ ± 25°C from the optimum mixing temperature based on the temperature recommended by the asphalt binder supplier.
- 260.4.2.12.5.3.1 added article as follows: A joint matching shoe may be used to control longitudinal grade of subsequent mats placed adjacent to the original mat.
- 260.4.2.13.6.2.1 added article as follows: A combination steel-drum vibratory/pneumatic tire roller may be used in place of the vibratory and pneumatic rollers.
- 260.4.2.14 added heading and articles for Material Transfer Vehicle (MTV).
- Table 260-9 deleted 2.36 mm - 150 µm sized material tolerance, only the 4.75 mm and above sized material and the Passing 75 µm along with the asphalt binder content are monitored.
- 260.4.3.4.3.2 added to article "or the temperature recommended by the asphalt binder supplier".
- 260.4.3.8.7 added to article "or the temperature recommended by the asphalt binder supplier".
- 260.4.3.8.14 revised article for clarity and to add that asphalt placed on shoulders is included.
- 260.4.3.8.15 revised article to specify that articles apply for ESAL counts equal to or greater than 3 million.
- 260.4.3.10.2.2 the asphalt mat tapering has been revised to specify that a smooth 1.5m long taper shall be paved rather than tapered at 25:1 minimum.
- 260.4.3.10.3.2 the asphalt mat tapering has been revised to specify that a smooth 1.5m long taper shall be paved rather than tapered at 25:1 minimum.

- p>260.4.3.12.1 deleted the sub-article requirement for minimum asphalt temperature. This is handled under Item 351 as article 351.3.1.2.
p>260.4.3.13 added heading and articles under
- Temporary Pavement Markings
- .
p>260.4.4.1.2 revised article as follows: The material being produced shall be sampled,
- reduced to testing size and tested
- in accordance with
- ASTM D75 Table 260-11 DOT manual: Sampling and Testing of Aggregates, Item 260
- .
p>260.4.4.1.2.1 revised article replacing Type and Minimum Frequency Table with words as follows: Sampling and testing will be performed 3 times per shift.
p>.1 Shift is defined as one production crew's daily work period.
p>260.4.4.3 added heading
- Sampling and Testing of Asphalt Concrete Mix
- and articles to clarify/reflect present field practice.
p>260.4.4.4 added heading
- Control of Asphalt Concrete Mix Production
- and articles to clarify/reflect present field practice.
p>260.4.5.1.8.1 revised the nominal diameter of the cores to 100 mm from 150 mm.
p>260.4.5.1.12 revised article clarifying that it is the averages of the densities which are compared to determine the percent compaction of the Lot.
p>260.4.5.1.15.7 revised article specifying a different procedure for combining old and new tests.
p>260.4.5.2.1.2 revised article specifying a new piece of equipment "High Speed Profiler" for checking the profile.
p>260.4.5.2.1.3 revised article changing ASTM procedure for checking the profile to ASTM E950.
p>260.4.5.2.2.1 revised article specifying a different Table 260-14 and that interchange ramps are no longer exempt from being profiled.
p>260.4.5.2.2.3 revised article specifying that bumps exceeding 8.5 mm will be subject to payment adjustment where in the 2003 edition there was a range from 8.5 to 13.4 which were exempt from payment adjustment.
p>260.4.5.2.3.1 revised article specifying that bumps exceeding 8.5 mm will be subject to payment adjustment where in the 2003 edition there was a range from 8.5 to 13.4 which were exempt from payment adjustment.
p>260.4.5.2.3.2 added article as follows: The Bump/Dip profile requirements shall apply to interchange ramps.
p>260.4.5.4.1.1 revised article as follows: Repairs to the Work
- to improve smoothness
- shall be carried out in accordance with
- the this
- Item within
- 29 30
- Days from the time the Contractor receives
- notification
- of the Engineer's
- written
- assessment of the Work, but in no case later than October 15
- th
- of the year that the asphalt concrete was placed
- .

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- 260.4.5.4.1.2 added article as follows: Repairs to correct surface defects shall be carried out in accordance with this Item within one year from the time the Contractor completes placement of the asphalt concrete.
- 260.4.5.4.1.3 revised articles as follows: The asphalt concrete used for replacement or overlay to correct surface defects shall be the same asphalt concrete mix designation as that which is removed or overlaid.
- .1 Any asphalt concrete which does not Conform to the Specifications to the requirements of this Item shall not be incorporated in the Work.
- 260.4.5.4.4.1 revised articles as follows: Rolling of bumps/dips to repair smoothness deficiencies will be permitted.
- .1 Neither 260.4.5.4.2 nor 260.4.5.4.3 shall be permitted to repair smoothness deficiencies.
- Table 260-14 payment adjustments for smoothness have been extended from 23.4/33.4 mm up to 39.5/49.5 mm; previously repairs were required after 23.4/33.4 mm.
- Table 260-15 payment adjustments for bump and dip penalty have been revised and penalty extended from 13.4 to 18.5 mm.
- 260.5.4 added heading and articles for Payment Adjustment for Use of Material Transfer Vehicle (MTV).
- 260.5.5 added heading and articles for Payment Adjustment for Change in PG Asphalt Binder Price.

Item 261 - Asphalt Concrete - End Result Specification (ERS)

- This Item has been rearranged/renumbered and revised to incorporate Superpave Mix Design. EASLs dictate the asphalt concrete mix design and there is no longer any differentiation for Type I or Type II Highways. The other significant revisions are identified as follows:
- 261.1.2.3.1 revised the definition of JMF as follows: JMF - the establishment of the single definite percentage for each passing the 4.75 mm and 75 μ m sieve fraction of aggregate, the percentage of blending sand and the asphalt binder content that will produce the desired mix properties under field conditions.
- .1 Percentage of constituent materials to be listed on the JMF sheet.
- 261.1.2.8.1 revised the definition of Mean of Deviations as follows: Mean of the Deviations - the sum of the absolute values of the deviations from the JMF or the air voids (4.00%) divided by the number of tests in the Lot.
- 261.2.1.1.3 revised article as follows: Performance Grade (PG) asphalt binder shall meet the requirements of AASHTO ~~MP1-98~~ M320, Table 1 - Performance Graded Asphalt Binder Specification.

- Table 261-1 revisions have been made to delete Marshall Mix Design requirements and replace and/or add requirements for Superpave Mix Design.
- 261.2.1.4 added heading and articles for Blending of Aggregates.
- 261.2.1.6.2 revised article deleting the requirement that the blending sand source shall be approved by the Engineer before the material is incorporated into the asphalt concrete mixture.
- Table 261-2 added Travcor 4505 to the approved anti-stripping admixtures.
- 261.2.2.2.2.2 revised article deleting the % of RAP by total weight of the combined materials, the % will be specified in the Contract Documents.
- 261.2.2.2.3.2 added to the article a requirement to add to the sample tag the pit/quarry ID number as indicated by the Engineer.
- 261.2.2.2.3.3.1 revised article as follows: A list of all constituent materials, including aggregate source(s), blending sand source(s), asphalt binder source(s) and anti-stripping admixture source(s).
- 261.2.2.2.3.3.6 revised article as follows: All Marshall Superpave mix design characteristics, including bulk relative specimen mass, graphs used in arriving at the final asphalt concrete mix design, the bulk relative density of each individual material and the combined aggregates, and the asphalt absorption of the combined aggregates.
- 261.2.2.2.3.3.7 revised article as follows: Samples of the aggregate: ~~{6}~~ (8)-18 kg samples of coarse aggregate, ~~{8}~~ (10)-18 kg samples of fine aggregate, (2)-18 kg samples of blending sand, and 0.5 L of anti-stripping admixture, if necessary.
- 261.2.2.2.3.4 revised articles as follows: The Engineer will require up to 40 8 Days from the time of receipt of the DMF, for evaluation by the Owner's Laboratory.
- .1 ~~Eight Days of~~ The evaluation period will include verification of the asphalt concrete mix design, moisture sensitivity testing, and ~~two Days of the evaluation period will be required for calibration of the ignition oven~~ verification of the bulk relative densities of the coarse and fine aggregates and blending sand(s).
- .1 In case of discrepancy in the bulk relative density values of the aggregates or blending sand(s), the Engineer's results shall prevail.

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- 261.2.2.2.3.7 revised/added articles for clarity of practice as follows: Once the DMF has been approved, the Engineer shall prepare samples of the combined aggregates and a sample of the asphalt binder for calibration of the ignition furnace to be used for the quality assurance.
- .1 The Engineer shall deliver the calibration samples to the quality assurance laboratory.
 - .2 The Engineer shall complete calibration of the ignition furnace within 3 Days of approval of the DMF.
 - .3 Production of asphalt concrete mix shall not start until the ignition furnace has been calibrated for the DMF.
- 261.2.2.2.4.1 revised/deleted articles as follows: The percentage by mass passing the 4.75 mm and the 75 μ m sieves of the combined aggregates and blending sand.
- Deleted the 2003 article specifying the submission of the bulk relative density and asphalt absorption of the combined aggregates.
- 261.2.2.2.5 revised heading Mix JMF Adjustments During Production and articles under the heading were deleted/revised as follows:
- .1 Adjustments to the JMF shall only be made upon approval of the Engineer. In no case will changes to the JMF be accepted during production of the Lot.
 - .2 The Contractor shall submit a revised DMF in accordance with 261.2.2.2.1 for a change in source of aggregate used in the asphalt concrete mix.
- 261.4.2.4.5.3.1 added article as follows A joint matching shoe may be used to control longitudinal grade of subsequent mats placed adjacent to the original mat.
- 261.4.2.5.1.2.1 added article as follows: A combination steel-drum vibratory/pneumatic tire roller may be used in place of the vibratory and pneumatic rollers.
- 261.4.2.6 added heading and articles for Material Transfer Vehicle (MTV)
- 261.4.3.3.1.2 added to article "or the temperature recommended by the asphalt binder supplier".
- 261.4.3.3.2.2 revised the AASHTO testing procedure to AASHTO M320.
- 261.4.3.3.4 added article as follows: Reclaimed asphalt concrete shall not be exposed to direct flame during and/or after introduction into the plant.

- 261.4.3.3.5 added articles as follows: Moisture Content:
- .1 The maximum moisture content allowed in the asphalt concrete mix as it is discharged to the surge bin, storage silo or pug mill shall be 0.15%.
 - .2 The aggregate shall be dried sufficiently so that visual evidence of moisture, such as but not limited to the presence of foaming, slumping or stripping of the mix, does not occur.
- 261.4.3.6.7 added to article "or the temperature recommended by the asphalt binder supplier".
- 261.4.3.6.14 revised article for clarity and to add that asphalt placed on shoulders is included.
- 261.4.3.6.15 revised article to specify that articles apply for ESAL counts equal to or greater than 3 million.
- 261.4.3.8.2.2 the asphalt mat tapering has been revised to specify that a smooth 1.5m long taper shall be paved rather than tapered at 25:1 minimum.
- 261.4.3.8.3.2 the asphalt mat tapering has been revised to specify that a smooth 1.5m long taper shall be paved rather than tapered at 25:1 minimum.
- 261.4.3.10.1 deleted the sub-article requirement for minimum asphalt temperature. This is handled under Item 351 as article 351.3.1.2.
- 261.4.3.11 added heading and articles under Temporary Pavement Markings.
- 261.4.4 table for Quality Control Testing Requirements which identified test methods, sampling and minimum frequency of testing has been deleted. The Contractor is still required to submit an ITP under 261.4.4.2.
- Table 261-4 updated/revised for Superpave mix designs and current test procedures.
- 261.4.5.3 Air voids has been added to the heading.
- 261.4.5.3.1 revised article deleting the option that loose samples could be taken from truck boxes.
- 261.4.5.4.1.2 revised article specifying that a new piece of equipment "High Speed Profiler" for checking the profile.
- 261.4.5.4.1.3 revised article changing ASTM procedure for checking the profile to ASTM E950.
- 261.4.5.4.2.3 revised article specifying that bumps exceeding 8.5 mm will be subject to payment adjustment where in the 2003 edition there was a range from 8.5 to 13.4 which were exempt from payment adjustment.
- 261.4.5.4.3.1 revised article specifying that bumps exceeding 8.5 mm will be subject to payment adjustment where in the 2003 edition there was a range from 8.5 to 13.4 which were exempt from payment adjustment.

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PAVEMENT STRUCTURE

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- 261.4.5.4.3.2 added article as follows: The Bump/Dip profile requirements shall apply to interchange ramps.
- 261.4.5.5.1.2 revised article as follows: The Contractor shall obtain one asphalt binder sample per 5000 t of asphalt concrete mix production, taken in accordance with ASTM D140 from the Contractor's asphalt binder storage tank(s).
- Table 261-5 revised to incorporate Air Voids and the Notes reworded/reformatted for clarity.
- 261.4.5.8.4.3 added to article "or thickness" combining the appeal of Lot for density or thickness into same article. Formerly thickness required 7 more cores and density 5 more cores, now the appeal for both density and thickness are determined with 5 more cores.
- 261.4.5.8.4.6 revised article specifying a different procedure for combining old and new tests.
- 261.4.5.8.4.6.2 revised article as follows: For thickness appeals 7 of the 10 test results must meet or exceed the lift thickness tolerance specified in Table 261-5.
- 261.4.5.9.1.1 revised article as follows: Repairs to the Work to improve smoothness shall be carried out in accordance with ~~the this~~ Item within ~~20~~ 30 Days from the time the Contractor receives ~~notification of~~ the Engineer's written assessment of the Work, but in no case later than October 15th of the year that the asphalt concrete was placed.
- 261.4.5.9.1.2 revised as follows: Repairs to correct surface defects shall be carried out in accordance with this Item within one year from the time the Contractor completes placement of the asphalt concrete.
- 261.4.5.9.1.3 revised articles as follows: The asphalt concrete used for replacement or overlay to correct surface defects shall be the same asphalt concrete mix designation as that which is removed or overlaid.
- .1 Any asphalt concrete which does not Conform to the Specifications to the requirements of this Item shall not be incorporated in the Work.
- 261.4.5.9.1 revised articles as follows: Rolling of bumps/dips to repair smoothness deficiencies will be permitted.
- .1 Neither 261.4.5.9.2 nor 260.4.5.9.3 shall be permitted to repair smoothness deficiencies.
- 261.5.2.1 added to article reference to new Table 261-11 - Unit Price Adjustment for Air Voids.
- 261.5.2.2 revised article as follows: For asphalt concrete placed as padding, on Shoulder areas where a single lift of asphalt concrete surface mix over granulars is specified and on Bridge decks, the UPA as shown in Table 261-8 shall not apply.
- 261.5.2.4 added UPA_{AirVoids} to Unit Price Adjustment formula.

Table 261-9	payment adjustments for smoothness have been extended from 23.4/33.4 mm up to 39.5/49.5 mm; previously repairs were required after 23.4/33.4 mm.
Table 261-10	payment adjustments for bump and dip penalty have been revised and penalty extended from 13.4 to 18.5 mm.
Table 261-11	added new table - Unit Price Adjustment for Air Voids (UPA _{AV}).
261.5.4	added heading and articles for <u>Payment Adjustment for Use of Material Transfer Vehicle.</u>
261.5.5	added heading and articles for <u>Payment Adjustment for Change in PG Asphalt Binder Price.</u>

Item 299 - Standard Drawings

Std. Dwg. 260-1	Stage 1 detail and Note 2 have been revised to reflect the change to a smooth 1500 mm long taper.
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Item 301 - Portland Cement Concrete

- 301.2.1.2 added article allowing the deletion of references to CSA throughout the Item as follows: Material properties shall conform to CSA A23.1, if not otherwise specified herein.
- 301.2.2.1 revised article as follows: GU Portland cement shall be used unless otherwise specified in the Contract Documents.
- 301.2.2.2 revised article as follows: Portland cement shall conform to the requirements of CSA A3001 and CSA A23.1.
- 301.2.6 added to the heading as follows: Other Admixtures Not Covered By ASTM.
- 301.4.2.2 revised article as follows: All cement, aggregate and other concrete construction materials shall be stored in accordance with the requirements of CSA A3001, and CSA A23.1.
- 301.6 note that the cross-reference to Item 809 for payment of cold weather concrete placement has been deleted, as Item 809 has been deleted from the 2006 Book.

Item 302 - Concrete In Structures

- Note: Item 302 has been revised by deleting requirements in the Item which are in CSA. An example would be the deletion of the Tables identifying the mix proportions for each type of concrete. For each type of concrete the class of exposure is specified in article 302.2.3.1.3 and the requirements/minimum specified compressive strength for the mix are provided in CSA A23.1 unless otherwise specified.
- 302.1.2 revised/expanded the detailed description for the different types of concrete.
- 302.1.3 added article as follows: A continuous structure is defined as the complete deck slab between the expansion joints.
- 302.2.2.2 a number of articles have been deleted, the requirements are in CSA A23.1.
- 302.2.2.2.2 revised article as follows: The amounts of deleterious substances in fine aggregate, each determined on independent samples complying with the grading requirements indicated in CSA A23.1, shall not exceed the limits specified in Table 302-1.
- Table 302-1 revised table and deleted some requirements in table, these same requirements are in CSA A23.1.
- Table 302-2 revised table and deleted some requirements in table, these same requirements are in CSA A23.1.
- 302.2.2.6.1 revised article as follows: Burlap or non-woven geotextile shall be used for curing horizontal surfaces.

- 302.2.2.6.2 revised article as follows: For vertical surfaces, curing shall be carried out by placing plastic over the burlap and securing the burlap and plastic in place against the vertical surface.
- 302.2.2.7.1 revised article as follows: The Portland cement shall be a blended Portland silica fume cement, GUb 7.5 SF (low alkali) meeting the requirements of CSA A3001.
- 302.2.2.7.2 revised article as follows: Fly ash meeting the requirements of CSA A3001 may be used in concrete, however, the Engineer reserves the right to limit its proportion to 20% of the cementing materials content in the mix.
- 302.2.3.1.2 article revised as follows: It shall be the responsibility of the Contractor to ensure that the mixture proportions ~~as reviewed by~~ submitted to the Engineer ~~shall be~~ are properly batched, mixed, placed and cured such that the concrete Conforms to the Specification.
- 302.2.3.1.3 revised article to specify class of exposure for the types of concrete as follows: Concrete types A, B, C, and D shall be exposure class C-XL and type E shall be F-1.
- 302.2.4.3 added article as follows: Materials shall be stored at least 100 mm off the ground.
- 302.3.1.1 revised article as follows: A statement signed by an officer or designated person having the authority, certifying that the cement furnished does not exceed 0.6% alkali equivalent, as measured by the percent of sodium oxide plus 0.658 times the percent of potassium oxide.
- 302.3.1.1.1 added article as follows: All testing for alkali content shall be carried out in accordance with CSA A3001-03, clause 4.3.5.
- 302.3.4 revised article as follows: The proposed design mix proportions, certified by the Contractor or his agent, and stamped and signed by a Professional Engineer registered or licensed to practice in the Province of New Brunswick, shall be submitted ~~for review~~ at least 14 Days before concrete production is due to commence.
- 302.4.4.1.1.1 moved here/added but not new as follows: New concrete shall be defined as concrete that has not attained its minimum specified compressive strength.
- 302.4.4.1.1.2 moved here/added but not new as follows: All loads to be applied on new concrete shall be subject to the approval of the Engineer.
- 302.4.4.2.1 revised article to include reference to new Standard Drawing as follows: Where Overexcavation occurs in the solid rock excavation for footings, concrete shall be placed in accordance with Standard Drawing 302-3 and as follows:
- 302.4.4.2.2 added article as follows: Prior to the placement of footings, the working slab concrete shall have a minimum compressive strength of 5 MPa.

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- 302.4.4.3.2 moved here/added but not new as follows: Prior to the placement of walls or column formwork all concrete in footings must have attained a minimum compressive strength of 20 MPa and the footing curing and protection requirements must be satisfied in accordance with 302.4.8.
- 302.4.4.3.3 moved here/added but not new as follows: Concrete in columns shall be allowed to cure a minimum of 36 hours before adjacent formwork is placed.
- 302.4.4.3.4 moved here/added but not new as follows: Falsework supported by brackets on columns shall not be placed until concrete has attained 60% of its minimum specified compressive strength.
- 302.4.4.3.5 moved here/added but not new as follows: Unless specifically permitted by the Engineer, in writing, concrete shall not be placed in the Superstructure until column forms have been stripped sufficiently to determine the character of concrete in the columns.
- 302.4.4.9.2.2 added article as follows: Vehicles or any superimposed dead load shall not be allowed on any portion of a continuous structure until all concrete has attained 80% of its minimum specified compressive strength.
- 302.4.4.9.4 added article as follows: During the concreting of the deck slab and barrier walls the Contractor shall ensure, at no cost to the Owner, that cement paste or other leakage from the forms is removed from the exposed portions of a steel superstructure employing an Engineer approved pressurized water spray.
- 302.4.5.1.1 added article as follows: If a concrete pump is proposed for the concrete placement the Contractor shall submit to the Engineer the method of maintaining or recharging the continuous flow of concrete in accordance with CSA A 23.1, Clause 7.
- 302.4.5.3 revised articles as follows: During placing, the upper surface of the concrete must be kept as level as possible and particular care must be taken to ensure that the tremie concrete has a reasonably smooth and level upper surface within + 150 mm or - 50 mm of at the elevation designated in the Contract Documents.
- .1 Concrete in excess of 300 mm of the upper designated surface shall be removed.
- 302.4.5.7 revised article as follows: The Owner shall, ~~at his own expense,~~ arrange to have one or more cores drilled from the structural tremie concrete of each pier for the purpose of checking the quality and strength of the concrete.
- 302.4.5.8 revised article as follows: Should such samples fail to meet the Specifications, the Contractor shall at his own expense, ~~be responsible to~~ carry out corrective measures, subject to the approval of the Engineer, to remedy the deficiencies identified in the structural tremie concrete.
- 302.4.7 revised heading as follows: Placing and Finishing Plastic Concrete.
- Table 302-3 revisions have been made for clarity, separating the grade and surface variation tolerances for finished deck and approach slabs.

- 302.4.7.3.1 added article as follows: If bearing block surfaces are ground to meet tolerances, the surface shall be artificially roughened as required to produce a surface texture similar to coarse sandpaper.
- 302.4.7.5.6.3.1 added articles as follows: If the supports for the rails are located in the concrete, the supports shall be the type which can be removed without disturbing the concrete, or partially removed so that no part remains less than 70 mm below the finished concrete surface.
- .1 The supports shall be removed and the resulting holes filled with deck concrete before the deck concrete has hardened.
- 302.4.9.6.2 revised article as follows: When the ambient temperatures are anticipated to be -15°C or lower then insulation providing an R value of not less than 20, may be used to protect concrete providing weather conditions and insulation procedures are such that the temperature of the surface of the concrete is maintained at a minimum of 10°C and a maximum of $32\ 50^{\circ}\text{C}$ for a period of 7 continuous Days and until the minimum specified ~~28-day~~ compressive strength is obtained.
- Table 302-4 revised Note 1 as follows: A test is defined as 2 cylinders to be broken at the specified age. Cylinders shall be sampled in accordance with CSA A23.2-1C.
- 302.5.1.1 revised articles as follows: The ~~specified~~ volume shall be the lesser of the computed volume of concrete as determined from the design dimensions presented in the Contract Documents or the actual volume of the concrete placed.
- 302.5.1.2 added article as follows: On concrete rehabilitation, the volume shall be the actual quantity of concrete placed.
- 302.5.1.2.2.2 revised as follows: For Overexcavation in excess of 150 mm below the specified elevation of the bottom of the footing, the width and length of the working slab concrete will be as shown on Standard Drawing 302-3, and the average depth of the working slab will be determined from the bottom of the excavation up to the specified elevation of the bottom of the footing.
- 302.5.1.2 revised article as follows: The specified volume of tremie concrete for which payment will be made will be the volume contained within cofferdams assuming the theoretical horizontal dimensions as shown in the Contract Documents and the base and upper surface elevations as measured in the field and in accordance with 302.4.5.3
- 302.6 note that the cross-reference to Item 809 for payment of cold weather concrete placement has been deleted, as Item 809 has been deleted from the 2006 Book.
- 302.6.2 added article as follows: The Owner will make partial payment in accordance with 908.7 for associated materials identified in 302.2.4.1.

Item 304 - Reinforcing Steel

- 304.6.2 added article as follows: The Owner will make partial payment for reinforcing steel in accordance with 908.7.

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Item 305 - Tension Splices

- 305.2.3 added article as follows: Materials shall be stored in a weatherproof enclosure.
- 305.6.2 added article as follows: The Owner will make partial payment for tension splices in accordance with 908.7.

Item 311 - Steel H Piles

- 311.2.5 added article as follows: Piles shall be stored in an organized, straight and horizontal fashion to avoid permanent distortion. Caps and points shall be acceptably stored on pallets or blocked at least 150 mm off the ground.
- 311.6.2 added article as follows: The Owner will make partial payment in accordance with 908.7 for steel H pile stored at the Work Site.

Item 312 - Steel Pipe Piles

- 312.2.4 added article as follows: Piles shall be stored in an organized, straight and horizontal fashion with the bottom tier being blocked at least 150 mm off the ground and stickers placed between the tiers. Points shall be acceptably stored on pallets or stored at least 150 mm off the ground. Nylon or canvas slings shall be used to handle the pipe piles.
- 312.6.2 added article as follows: The Owner will make partial payment in accordance with 908.7 for steel pipe pile stored at the Work Site.

Item 321 - Steel Sheet Pile Cofferdams

- 321.2.6 added article as follows: Materials shall be stored in an organized, straight and horizontal fashion to avoid permanent deformation.
- 321.6.2 added articles as follows: The Owner will make partial payment for steel sheet pile in accordance with 908.7.
- .1 Partial payment for used steel sheet pile will be calculated on 30% of the estimated purchase price for new steel sheet pile.

Item 331 - Precast Prestressed Concrete Beams

- 331.2.8.6 added article as follows: Beams shall be stored on blocks at least 150 mm off solid level ground and adequately braced and secured to prevent overturning.
- 331.4.3.2.1 revised article as follows: Proposed patching materials and methods for non-structural repairs shall be submitted for approval of ~~to~~ the Engineer ~~for approval~~.

- 331.4.3.2.3 revised/added articles as follows: ~~Beams, that require patching, which are stressed by transfer of the prestressing force without the prior consent of the Engineer may be rejected~~ Beams with structural defects including cracks and honey comb are subject to rejection if the load carrying capacity or durability are reduced.
- .1 Repairs of a structural nature shall not be undertaken until the manufacturer's engineer has carried out and obtained the following:
- .1 Investigated the structural implications of the defect or the damage.
- .2 Established the cause of the defect or the damage.
- .3 Received approval of the proposed repair from the Owner.
- 331.6.2 added article as follows: The Owner will make partial payment for beams in accordance with 908.7.

Item 335 - Steel Superstructure

- 335.1.2 revised article as follows: The Bridge Superstructure has been designed according to CAN/CSA-S6-00, with a CL625-ONT live loading and all Work shall Conform to this, except as noted in the Contracts Documents.
- 335.2.2.2 revised article as follows: All tee sections, channels, rolled beam and angle shapes and steel pintles shall Conform to CAN/CSA G40.21 M Grade 350A.
- 335.2.2.6 added article as follows: All anchor and anchor bolt assemblies including fabricated sections, nuts and washers shall Conform to CAN/CSA G40.21 Grade 350A.
- 335.4.2.13 all articles under the heading Repair Welding have been revised.

Item 341 - Steel Laminated Bearings

- 341.2.1.10 added article as follows: Bearings shall be stored at least 100 mm off the ground in a weatherproof enclosure
- 341.6.2 added article as follows: The Owner will make partial payment for steel laminated bearings in accordance with 908.7.

Item 342 - Bridge Pot Bearings

- 342.2.22 added article as follows: Bearings shall be stored at least 100 mm of the ground in a weatherproof enclosure.
- 342.3.1.1.1.5 revised article as follows: load capacity at serviceability limit states ~~Type II~~ Combination 1, including:

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- 342.4.1.1.3 revised article as follows: All steel components of the bearings, including fasteners, shall be proportioned in Conformance with the requirements of CAN/CSA S6-88 ~~Design of Highway Bridges~~.
- 342.4.1.1.4 revised article as follows: The average stress in the elastomer at serviceability limit state ~~Type-II~~ Combination 1 loads shall Conform to the requirements of 342.2.4.
- 342.4.1.2.3.1 revised article as follows: For bearings with a capacity of 5000 kN or less at serviceability limit state ~~Type-II~~ Combination 1, 10% of the vertical load capacity.
- 342.4.1.2.7 revised article as follows: At serviceability limit state ~~Type-II~~ Combination 1 loads and maximum rotation, the shift in the axial load from the centre of bearing shall not exceed the following values:
- 342.4.1.2.9 revised article as follows: The rotation of confined elastomeric bearings about a horizontal axis shall be limited so that the vertical strain at the perimeter of the elastomer, at serviceability limit state ~~Type-II~~ Combination 1 loads does not exceed 0.15 of the elastomer thickness.
- Table 342-4 revised as follows: Serviceability - ~~Type-II~~ Combination 1
- 342.4.1.3.6.3 revised article as follows: The average contact pressure at serviceability limit state ~~Type-II~~ Combination 1 loads for filled TFE elements used to face mating surfaces for guides for lateral restraint shall not exceed the following:
- 342.4.1.6.1.1 revised article as follows: For bearings with a capacity of 5000 kN or less at serviceability limit state ~~Type-II~~ Combination 1, 10% of the vertical load capacity.
- 342.4.1.6.1.2 revised article as follows: For bearings with capacity over 5000 kN at serviceability limit state ~~Type-II~~ Combination 1, 500 kN plus 5% of the vertical load capacity in excess of 5000 kN.
- 342.4.1.9.1 revised article as follows: At serviceability limit state ~~Type-II~~ Combination 1 loads the average concrete bearing pressure shall not exceed 17 MPa.
- 342.6.2 added article as follows: The Owner will make partial payment for confined elastomer (pot) Bridge bearings in accordance with 908.7.

Item 343 - Sealed Expansion Joint Assemblies

- 343.2.7 revised article as follows: The design loading for sealed expansion joint assemblies and for centre beams shall be GS600 CL-625-ONT plus the dynamic load allowance, and all stresses shall be within the limits specified in CAN/CSA S6.
- 343.2.13 added article as follows: Sealed expansion joint assemblies shall be stored at least 150 mm off the ground in a manner to maintain the cross slope and avoid permanent distortion.
- 343.6.2 The Owner will make partial payment for sealed expansion joint assemblies in accordance with 908.7.

Item 344 - Finger Joint Assemblies

- 344.2.7 revised article as follows: Structural steel in finger plate assemblies shall meet the requirements of CAN/CSA G40.21M-300W Grade 350AT Category 3 or ASTM A588 with a certified Charpy V-notch impact energy of 27 joules when tested at minus 30 °C.
- 344.2.9 added article as follows: Steel finger joint assemblies shall be stored at least 150 mm off the ground in a manner to maintain the cross slope and avoid permanent distortion.
- 344.6.2 added article as follows: The Owner will make partial payment for steel finger joint assemblies in accordance with 908.7.

Item 345 - Steel Ballastwall Angle

- 345.2.6 added article as follows: Steel ballastwall angle shall be stored at least 100 mm off the ground in a manner to maintain the cross slope and avoid permanent distortion.
- 345.6.2 added article as follows: The Owner will make partial payment for steel ballastwall angle assemblies in accordance with 908.7.

Item 346 - Guide Rail System - Structures

- 346.2.1 revised article to specify, all materials shall be supplied by the Contractor.
- 346.3.1 revised article as follows: The Contractor shall ~~notify the Engineer a minimum of 14 Days in advance of the requirements for materials under 346.2.1~~ submit shop drawings for the aluminium guide rail system in accordance with Item 956.
- 346.5.1 revised article as follows: The Quantity to be measured for payment shall be the number of linear metres of aluminium guide rail system on a Highway Structure supplied and installed in accordance with this Item.

Item 347 - Granite Curbing

Deleted from Book; sent to Design Library.

Item 348 - Service Duct - Structures

- 348.2.6 added articles as follows: Storage
- .1 Materials are to be stored in an organized fashion at least 100 mm off the ground with individual pieces contained or strapped.
- 348.5.1 revised article as follows: The Quantity to be measured for payment shall be the number of linear metres of duct supplied and installed in accordance with this Item.

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- 348.6.2 added article as follows: The Owner will make partial payment for duct in accordance with 908.7

Item 351 - Waterproofing

- 351.2.1.3 revised article as follows: The approved waterproofing system shall be selected from the list provided in the Contract Documents.
- 351.2.2 added article as follows: Materials shall be stored at least 100 mm off the ground in a weatherproof enclosure.
- 351.3.1.2 revised article as follows: The manufacturer's specified minimum temperature for asphalt concrete ~~prior to~~ during placement on the waterproofing system.
- 351.3.1.3 added article as follows: The Contractor shall select a product appropriate for the application and field conditions in accordance with the manufacturer's specifications.
- 351.3.1.4 added article as follows: The waterproofing and asphalt concrete shall perform as a waterproofing system.
- 351.4.5.1 added article as follows: Solvent based materials shall be cured for appropriate time period prior to the placing of the waterproofing membrane.
- 351.6.2 added article as follows: The Owner will make partial payment for the waterproofing system in accordance with 908.7.

Item 365 - Engineered Fill

- 365.2.5 revised article as follows: The material, when tested by the Micro-Deval test method in accordance with ASTM C131 or C535 MTO LS-618, shall ~~show an abrasion loss of not more than 40%~~ have a Micro-Deval loss not greater than 30%

Item 381 - Removal of Structures

- 381.3.1 revised article as follows: The Contractor shall submit drawings and design calculations in accordance with Item 956.
- 381.3.2 added articles as follows: The Contractor shall submit to the Engineer, upon request, at least 14 days prior to the commencement of the Work, the proposed method and sequencing of the removal of the Structure for approval by the Engineer and the Department of the Environment and Local Government.
- .1 revised article as follows: The submittal shall include the proposed method for the capture and removal of the debris from the Structure, the proposed retention system for preventing the material from falling into the wetted portion of the watercourse and techniques to be used for the removal of any material which inadvertently falls into the watercourse.

- 381.4.2 revised article as follows: For Structures in or over watercourses, the Contractor shall carry out the Work in accordance with Item 948 and the following:
- 381.4.2.1 added article as follows: The Structure shall be removed without releasing harmful materials or contaminants into the watercourse.
- 381.4.2.2 added article as follows: The removal of material which falls into the river shall be accomplished without stationing equipment in the wetted portion of the watercourse or disturbing the riverbed.
- 381.4.3 added article as follows: The Contractor shall protect public traffic from the dust and debris resulting from the Work.
- 381.4.5.1 added article as follows: The Structure shall be removed in such a manner to eliminate contact with the riverbed.
- 381.4.6.2 revised article as follows: Backfilling of the Work Area shall be carried out in accordance with 106.4 or 108.4, depending on the backfill material to be placed.
- 381.4.7 revised article as follows: All waste and demolition debris shall become the property of the Contractor and shall be disposed of outside the Work Site at an approved Construction and Demolition Material Disposal Site.
- 381.4.7.1 added article as follows: Waste and demolition debris shall be recycled where possible.
- 381.4.8 added article as follows: Any damage to the riverbed or to portions of the Structure which are to remain in place shall be repaired by the Contractor at his own expense.

Item 399 - Standard Drawings

- Std. Dwg. 302-1 replaced "Deck Drains" with "Deck Drain Assemblies" in fifth bullet of notes.
- Std. Dwg. 302-2 detailing on drawing revised.
- Std. Dwg. 302-3 new drawing - Concrete Limits For Foundation Overexcavation.
- Std. Dwg. 311-1 Pile Cap Details for a 310mm and 360mm piles have been replaced with details for HP 310x79 HP, HP 310x132 and HP 360x132.
- Std. Dwg. 311-2 deleted option for a PRUYN Pile Point No. 75750.
- Std Dwg. 311-3 revised detailing for clarity and corrected errors on Detail "A".
- Std. Dwg. 311-5 added the word "Note" and boxed the wording that goes with the note for clarity.
- Std. Dwg. 312-1 corrections were made to the Pile Point Detail and Sections A-A and B-B.
- Std. Dwg. 312-2 revised detailing.

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STRUCTURES

DIVISION 300

- Std. Dwg. 331-1 revised detailing for clarity on AASHTO Type I/ II/ III/ IV and NBDOT Type I.
Revisions made to the Bulb-Tee Beam detail.
- Std. Dwg. 342-1 detailing for the two types of bearings has been separated for clarity.
- Std. Dwg. 345-1 the ballastwall section detail has been revised to indicate a typical straight plumb face.
- Std. Dwg. 351-1 revised to reflect current NBDOT requirements.
- Std. Dwg. 351-2 revised to reflect waterproofing details for a typical straight plumb wall and approach slab inset.
- Std. Dwg. 366-1 revised shading and details for clarity.



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MUNICIPAL

DIVISION 400

Item 401 - Storm Sewer Pipe

- 401.6.2 added articles as follows: The Owner will make partial payment in accordance with 908.7 for storm sewer pipe stored at the Work Site.
- .1 Partial payment will be made for specialized storm sewer pipe stored at the supplier's yard.

Item 404 - Precast Catch Basin

- 404.6.2 added article as follows: The Owner will make partial payment for precast catch basins in accordance with 908.7.

Item 407 - Frames and Grates Or Covers

- 407.1.1 revised article to indicate singular "frame with grate or cover" rather than plural "frames and grates or covers". This has been revised similarly throughout this Item.

Item 409 - Relocation of Catch Basin

- 409.2 revised/rearranged to indicate that the catch basin is to be reused.
- 409.4.2.1 moved/added from Materials under Construction as follows: The Contractor shall take all precaution to preserve the catch basin intact and undamaged.
- 409.4.2.2 moved/sdded from Materials under Construction as follows: If the catch basin is damaged as a result of the Contractors actions, as determined by the Engineer, the Contractor shall be responsible to replace the catch basin.
- 409.4.3 revised article as follows: Excavation and backfilling of a trench from the catch basin location to the relocation position shall be carried out in accordance with 401.4.

Item 410 - Paving Catch Basin Apron

- 410.2.2 revised cross-reference for Aggreagte Base requirements to 201.2 rather than 203.2.
- 410.4.4 revised article deleting all other requirements except the reference to Standard Drawing 410-1 which contains the details/requirements for construction.

Item 416 - Curb And Gutter

- 416.2.2 deleted former table for Concrete Mix Proportions and inserted the CSA class of exposure C-2. CSA A23.1, Table 2 indicates the requirements for the class of exposure.

- 416.2.5 revised cross-reference for Aggregate Base requirements to 201.2 rather than 203.2.
- 416.3.1 added that submittals are required in accordance with 301.3.
- 416.4.5 replaced rolling pattern with test strip; test strip procedure is detailed in 936.2.7.
- 416.4.6.1 revised article as follows: Excavated material, suitable for and surplus to backfilling, shall be disposed of ~~by the Contractor~~ as directed by the Engineer.
- 416.4.7 revised article deleting minimum thickness requirement as this is on the cross-referenced Standard Drawings. Also added cross-reference to Standard Drawing 416-1.
- 416.4.8.1 revised article as follows: Joint layout and joint details shall be laid out and constructed in accordance with Standard Drawings 419-2 and 419-3.
- 416.4.12.1 deleted the requirement for the Engineer to approve the slipforming method.
- 416.6.1 revised to include a separate Unit Price for each type of curb and gutter.

Item 419 - Concrete Sidewalk

- 419.2.2 deleted former table for Concrete Mix Proportions and inserted the CSA class of exposure C-2. CSA A23.1, Table 2 indicates the requirements for the class of exposure.
- 419.2.5 revised cross-reference for Aggregate Base requirements to 201.2 rather than 203.2.
- 419.4.5 replaced rolling pattern with test strip; test strip procedure is detailed in 936.2.7.
- 419.4.13.1 deleted the requirement for the Engineer to approve the slipforming method.

Item 420 - Asphalt Sidewalk

- 420.2.2 revised cross-reference for Aggregate Base requirements to 201.2 rather than 203.2.
- 420.4 revised articles under CONSTRUCTION deleting wording which detailed requirements duplicated on cross referenced Standard Drawings.
- 420.4.3 replaced rolling pattern with test strip; test strip procedure is detailed in 936.2.7.
- 420.4.6 revised article as follows: A cross slope of 20 to 30 mm per metre shall be placed and the direction of the Slope shall, in general, be towards the curb, however local conditions may result in the necessity to vary this Slope and the Contractor is to advise the Engineer if this Slope condition must be altered.

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DIVISION 400

- 420.4.7 revised article deleting requirement for Engineer approval of method as follows: The Contractor shall place the sidewalk using an asphalt spreader in accordance with 260.4.
- 420.5.2 revised article to include cross reference to Standard Drawing 420-1 as follows: Measurements shall be taken as the dimension of the Work, as indicated on Standard Drawing 420-1 and no deductions shall be made for areas occupied by light standards, manhole covers, poles or other similar objects.

Item 421 - Concrete Unit Pavers

Deleted from Book; sent to Design Library.

Item 422 - Clay Brick Pavers

Deleted from Book; sent to Design Library.

Item 423 - Removal of Curb and Gutter

- 423.1 revised article deleting reference to excavation in the DESCRIPTION and placed reference to excavation under CONSTRUCTION.
- 423.4.2 added reference to excavation in article as follows: Excavated curb and gutter materials shall become the property of the Contractor and shall be disposed of outside the Work Site.
- 423.5.1 revised article deleting reference to excavation as follows: The Quantity measured for payment shall be the number of linear metres of curb and gutter removed in accordance with this Item

Item 424 - Removal of Sidewalk

- 424.1 revised article deleting reference to excavation in the DESCRIPTION and placed reference to excavation under CONSTRUCTION.
- 424.4.2 added reference to excavation in article as follows: Excavated sidewalk materials shall become the property of the Contractor and shall be disposed of outside the Work Site.
- 424.5.1 revised article deleting reference to excavation as follows: The Quantity measured for payment shall be the number of square metres of Sidewalk removed in accordance with this Item.

Item 425 - Removal Of Underground Services

- 425.4.2 combined/replaced two articles in the 2003 edition as follows: The Contractor shall carry out the Work in accordance with Item 948.
- 425.4.10 revised article as follows: The Contractor shall ~~be responsible to~~ completely backfill the ~~hole~~ excavation resulting from the removal of underground services, with an approved material of the quality matching the surrounding material, and shall finish the backfilled area to match the surrounding grade.
- 425.6.1 added that this Item includes a separate Unit Price for each type of removal of underground services.

Item 499 - Standard Drawings

- Std. Dwg. 404-1 revised wording to "FRAME WITH GRATE" from "FRAME AND GRATE".
- Std. Dwg. 410-1 revised wording to "FRAME WITH GRATE" from "FRAME AND GRATE".
- Std. Dwg. 416-3 revised wording to "FRAME WITH GRATE" from "FRAME AND GRATE".

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TRAFFIC CONTROL DEVICES

DIVISION 500

Item 510 - Guide Posts

- 510.2.3 added article as follows: The posts shall be sound and rot-free, and shall meet or exceed the requirements for No. 1 Structural Posts and Timbers, graded in accordance with the National Lumber Grading Authority (NLGA) Standard Grading Rules for Canadian Lumber.
- 510.2.4 added article as follows: Preparation, handling and treatment of posts shall be in accordance with CAN/CSA-080 and the American Wood Preservers' Association (AWPA) standards.
- 510.2.5 added article as follows: Prior to pressure treating, posts shall be incised on all four sides and dried to their fibre saturation point of 25 to 30% at 25 mm depth.
- 510.2.6 added article as follows: The preservative shall be as follows: for pressure treating, chromated copper arsenate (CCA); and for field-cut surfaces, Wolman End Cut Preservative (Green) or equivalent applied in two coats.

Item 512 - Guide Rail

- 512.4.5.2 added article as follows: Additional 63 mm x 19 mm slots required in the guide rail shall meet the requirements of AASHTO M180.

Item 515 - Energy-Absorbing Guide Rail Terminal

- 515.1.1 deleted the word "system" from this article and other articles throughout the Item.
- 515.4.4 revised article as follows: The impact end of each EAGRT may be offset up to 300 600 mm away from the line of the guide rail installation if the line is not on a horizontal curve, as determined by the Engineer.
- 515.4.8 revised article as follows: ~~For Highways in use by the public the~~ Installation of any EAGRT shall be performed ~~within 2 Days of~~ concurrently with the completion of the guide rail installation to which it will be attached.

Item 516 - Removal of Energy-Absorbing Guide Rail Terminal

New Item incorporated into 2006 edition.

Item 531 - Underground Duct

- 531.4.3 added article as follows: On new construction the Work under this Item shall be completed before Aggregate Subbase placement.

Item 543 - Removal of Light Standard

- 543.4.2.1 added article as follows: Electrical equipment shall be removed in accordance with New Brunswick Regulation 84-165 (Electrical Installation and Inspection Act).

Item 545 - Removal of Median Flashing Light

- 545.4.2.1 added article as follows: Electrical equipment shall be removed in accordance with New Brunswick Regulation 84-165 (Electrical Installation and Inspection Act).

Item 552 - Roadside Sign

- 552.4.7 added cross-reference to new Standard Drawings 552-2 to 552-6 as follows: Sign panels shall be installed as shown in the Contract Documents and Standard Drawing 552-1 through 552-6.

Item 554 - Overhead Sign Structure Foundation

- 554.2.2 revised article to reference CSA class of exposure as follows: Concrete shall be supplied in accordance with 301.2, class of exposure C-2.

Item 555 - Overhead Sign Structure

- 555.1.1 deleted the design requirement from the article as follows: This Item consists of the supply and erection of an overhead sign Structure.
- 555.2.7 added article as follows: Materials shall be stored on skids at least 150 mm off the ground in an organized, straight and horizontal fashion to avoid permanent distortion.
- 555.4.2 deleted Design heading and articles; DOT will continue to carry out the design for the Overhead Sign Structures
- 555.5.1 deleted the design requirement from the article as follows: The Quantity to be measured for payment shall be the number of overhead sign Structure(s) supplied and erected in accordance with this Item.
- 555.6.2 added article as follows: The Owner will make partial payment for the overhead sign structure in accordance with 908.7.

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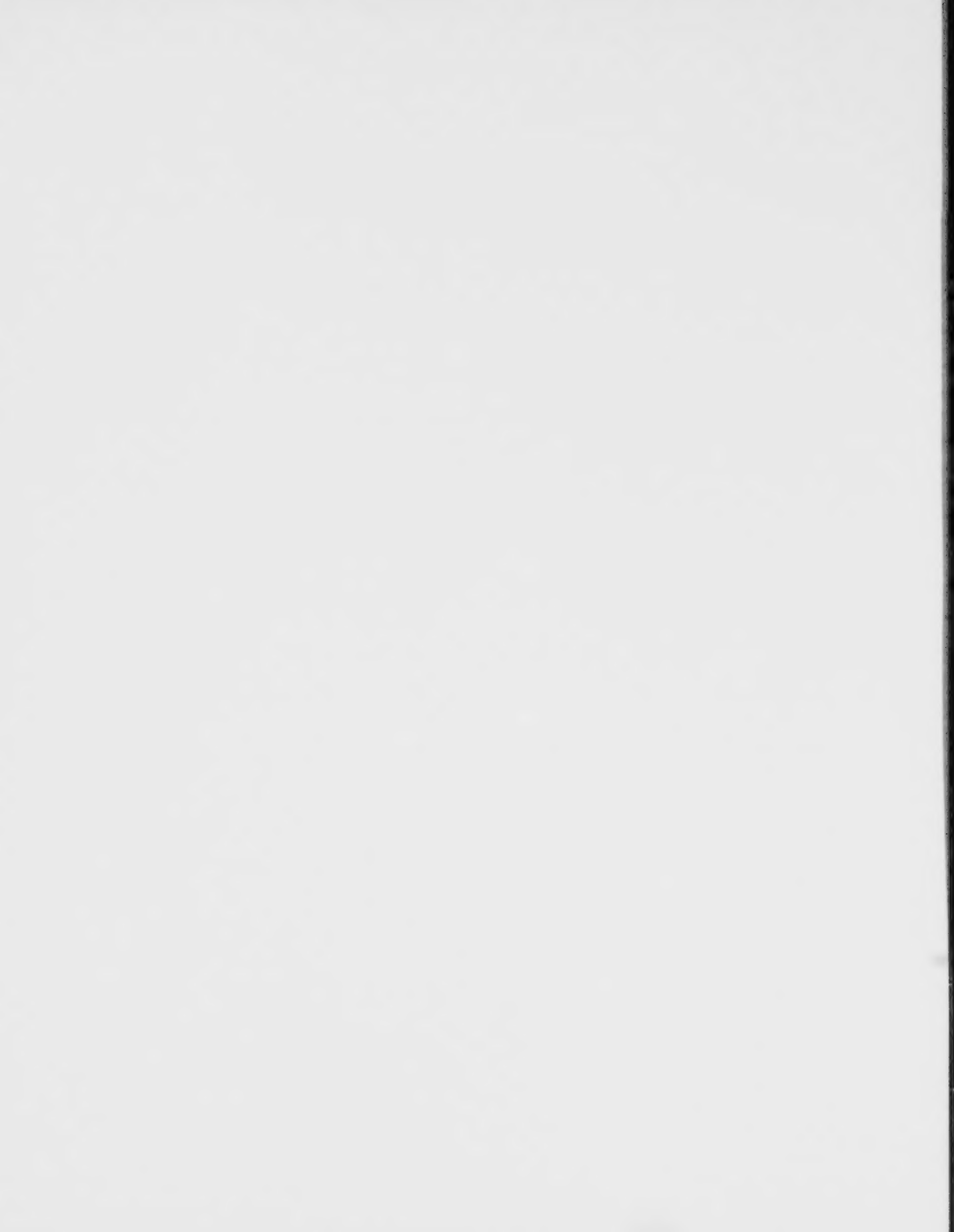
**New Brunswick
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TRAFFIC CONTROL DEVICES

DIVISION 500

Item 599 - Standard Drawings

- Std. Dwg. 512-3 revised on "Guide Rail to Barrier Wall Detail" reference For Further Placement Information to Standard Drawing 512-2; previously incorrectly referenced Standard Drawing 512-1.
- Std. Dwg. 530-1 revised on Section A-A note for depth of Underground Service Warning Tape as follows: UNDERGROUND SERVICE WARNING TAPE, PLACED 300mm BELOW ASPHALT SURFACE. Klein Cat. No. 58002.
- Std. Dwg. 531-1 revised on Secondary Cable Trench Detail FINAL GRADE reference to FINAL GRADE OR ASPHALT SURFACE.
- revised on Secondary Cable Trench Detail note for depth of Underground Service Warning Tape as follows: UNDERGROUND SERVICE WARNING TAPE, PLACED 300mm BELOW FINAL GRADE OR ASPHALT SURFACE. Klein Cat. No. 58002.
- revised NOTE 3 as follows: CHECK WITH ALIANT FOR FIBRE-OPTIC CABLE LOCATION. CALL 1-800332-3333 BEFORE DIGGING.
- Std. Dwg. 538-1 added detail for three screw base sign foundations.
- Std. Dwg. 540-1 revised grade of steel to 400 in Note 2 as follows: STEEL SHALL MEET CAN/CSA G30. 12-M-GRADE 400 AND SHALL BE IN THE FORM OF DEFORMED ROUND BARS.
- Std. Dwg. 540-2 revised grade of steel to 400 in Note 2 as follows: STEEL SHALL MEET CAN/CSA G30. 12-M-GRADE 400 AND SHALL BE IN THE FORM OF DEFORMED ROUND BARS.
- Std. Dwg. 540-3 revised grade of steel to 400 in Note 2 as follows: STEEL SHALL MEET CAN/CSA G30. 12-M-GRADE 400 AND SHALL BE IN THE FORM OF DEFORMED ROUND BARS.
- Std. Dwg. 552-1 revisions were made to this standard drawing to correspond with the strap sequence being detailed on new Standard Drawings 552-2 to 552-6.
- Std. Dwg. 552-2 added new Roadside Sign Strap Sequence drawing.
- Std. Dwg. 552-3 added new Roadside Sign Strap Sequence drawing.
- Std. Dwg. 552-4 added new Roadside Sign Strap Sequence drawing.
- Std. Dwg. 552-5 added new Roadside Sign Strap Sequence drawing.
- Std. Dwg. 552-6 added new Roadside Sign Strap Sequence drawing.



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ENVIRONMENTAL

DIVISION 600

Item 604 - Jute Mats

New Item incorporated into 2006 edition.

Item 605 - Erosion Control Structure

605.4.3 added article as follows: Erosion control structures may be installed in natural swales prior to ditch construction, in temporary or partially constructed ditches, and/or in completed ditches.

Table 605-1 revised the Application column of the Table to clarify when and where the different types of erosion control structures are to be installed.

Item 609 - Rock Weir

New Item incorporated into 2006 edition.

Item 613 - Topsoil

613.2.2 revised/shortened to depict what will be accepted for topsoil as follows: Topsoil composition shall consist of 20 to 70% sand and contain 2 to 10% organic matter by weight.

613.4.4.1 revised article to shall as follows: Hand placement and raking ~~may~~ shall be required in areas adjacent to finished lawns or in areas of restricted access.

613.4.4.2 added article as follows: In areas of lawn restoration, topsoil shall be rolled using a lawn roller or approved equivalent.

Item 614 - Hydroseeding

614.1.2 added to Description to identify the different mix designations as follows: Hydroseeding shall be identified by the following mix designations:

- .1 Roadside Mix with no Mulch per 616.4 - Hydroseeding "A"
- .2 Municipal Mix with no Mulch per 616.4 - Hydroseeding "AM"
- .3 Roadside Mix with Mulch per 616.4 - Hydroseeding "B"
- .4 Municipal Mix with Mulch per 616.4 - Hydroseeding "BM"
- .5 Roadside Mix with Bonded Fibre matrix - Hydroseeding "C"

Table 614-1 revised the percentage for Alsike or White Clover to 5% from 10% in 2003 Book and revised the percentage for Annual Ryegrass to 15% from 10% in 2003 Book.

Table 614-2 revised to include an Alternative 2 Seed Mix.

- 614.2.2.1 revised article as follows: Additional alternatives to the municipal seed mix may be approved by the Engineer.
- 614.2.8.2 added article as follows: Only straw mulch 616.2 shall be used for Hydroseeding BM.
- 614.4.4 revised article as follows: The Contractor shall ensure all such areas are prepared to a loosened condition to a minimum depth of 25 mm no sooner than 2 Days prior to hydroseeding.
- Table 614-3 revised separating application rates for types of material for each mix designation.
- 614.4.8.1.1 revised to include pre-measuring prior to application as follows: The Engineer shall approve and pre-measure all areas to be hydroseeded, in advance of the commencement of the hydroseeding of any area.
- 614.4.8.2.1 added conditions for the application of C as follows: Hydroseeding C shall not be applied under the following conditions:
- .1 During or immediately after a heavy rainfall;
 - .2 If rain is forecast to occur within the next 24 hours, or within the next 48 hours if the Engineer deems that drying conditions are poor; and
 - .3 On slopes that are leaching water.
- 614.4.8.3.2 revised to include AM and BM as follows: Either Hydroseeding A (AM) or B (BM) at the discretion of the Engineer, may be used for the period of May 1st to Labour Day.

Item 616 - Mulching

- 616.4.3.3 added article as follows: Binder application shall be completed within 48 hours after the unprocessed hay or straw has been placed.

Item 618 - Trees and Shrubs

New Item incorporated into 2006 edition.

Item 620 - Temporary Water Barrier

New Item incorporated into 2006 edition.

Item 621 - Temporary Water Control Works

New Item incorporated into 2006 edition.

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ENVIRONMENTAL

DIVISION 600

Item 699 - Standard Drawings

- Std. Dwg. 604-1 added new standard drawing for corresponding new Item.
- Std. Dwg. 605-3 revised width dimension to VARIES SEE SECTION B-B.
- Std. Dwg. 605-4 clarified what H represents by extending the dimension lines in Section A-A.
- clarification is provided in Section B-B by the addition of an asterisk (*) beside H corresponding to the * alongside the note for H where the different heights are identified for the different ditch depths.
- clarified what the width of the structure is based on different depths for H.
- Std. Dwg. 605-6 deleted the unnecessary detail showing a Typical Hay/Straw Bale Dimension.
- Std. Dwg. 605-7 added to NOTE 2 as follows: JOINTS OF DOWNGRADE BALES SHOULD BE STAGGERED FROM UPSTREAM BALES.
- Std. Dwg. 609-1 added new standard drawing for corresponding new Item.



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PROVISIONAL SUMS

DIVISION 800

Item 801 - Haulage - Soil, Rock and Aggregate

Table 801-1 revised rates.

**Table 801-1
HAULAGE RATES
Soil, Rock and Aggregate**

• effective April 1, 2006 •

DISTANCE in KILOMETRES	RATE per TONNE (\$)	DISTANCE in KILOMETRES	RATE per TONNE (\$)	DISTANCE in KILOMETRES	RATE per TONNE (\$)
0 - 1	0.84	25 - 26	4.71	50 - 51	7.67
1 - 2	1.02	26 - 27	4.85	51 - 52	7.76
2 - 3	1.18	27 - 28	4.98	52 - 53	7.84
3 - 4	1.35	28 - 29	5.12	53 - 54	7.94
4 - 5	1.50	29 - 30	5.26	54 - 55	8.02
5 - 6	1.65	30 - 31	5.41	55 - 56	8.11
6 - 7	1.81	31 - 32	5.54	56 - 57	8.19
7 - 8	1.96	32 - 33	5.67	57 - 58	8.28
8 - 9	2.11	33 - 34	5.80	58 - 59	8.37
9 - 10	2.26	34 - 35	5.94	59 - 60	8.46
10 - 11	2.42	35 - 36	6.07	60 - 61	8.55
11 - 12	2.57	36 - 37	6.18	61 - 62	8.63
12 - 13	2.72	37 - 38	6.30	62 - 63	8.72
13 - 14	2.88	38 - 39	6.43	63 - 64	8.80
14 - 15	3.03	39 - 40	6.55	64 - 65	8.89
15 - 16	3.18	40 - 41	6.65	65 - 66	8.97
16 - 17	3.34	41 - 42	6.76	66 - 67	9.05
17 - 18	3.49	42 - 43	6.89	67 - 68	9.12
18 - 19	3.64	43 - 44	6.98	68 - 69	9.20
19 - 20	3.79	44 - 45	7.09	69 - 70	9.27
20 - 21	3.95	45 - 46	7.19	70 - 71	9.35
21 - 22	4.10	46 - 47	7.28	71 - 72	9.42
22 - 23	4.25	47 - 48	7.38	72 - 73	9.51
23 - 24	4.41	48 - 49	7.49	73 - 74	9.58
24 - 25	4.56	49 - 50	7.58	74 - 75	9.66
Each succeeding kilometre after 75 kilometres increases at a rate of \$ 0.07 per tonne					

Item 802 - Haulage - Asphalt Concrete

Table 802-1 revised rates.

**Table 802-1
HAULAGE RATES
Hot Mix Asphalt Concrete**

• effective April 1, 2006 •

DISTANCE in KILOMETRES	RATE per TONNE (\$)	DISTANCE in KILOMETRES	RATE per TONNE (\$)	DISTANCE in KILOMETRES	RATE per TONNE (\$)
0 - 1	1.11	25 - 26	5.11	50 - 51	8.24
1 - 2	1.26	26 - 27	5.26	51 - 52	8.33
2 - 3	1.44	27 - 28	5.43	52 - 53	8.44
3 - 4	1.62	28 - 29	5.58	53 - 54	8.54
4 - 5	1.79	29 - 30	5.73	54 - 55	8.63
5 - 6	1.95	30 - 31	5.88	55 - 56	8.73
6 - 7	2.10	31 - 32	6.02	56 - 57	8.83
7 - 8	2.26	32 - 33	6.16	57 - 58	8.91
8 - 9	2.42	33 - 34	6.29	58 - 59	9.01
9 - 10	2.58	34 - 35	6.43	59 - 60	9.09
10 - 11	2.73	35 - 36	6.56	60 - 61	9.18
11 - 12	2.90	36 - 37	6.68	61 - 62	9.26
12 - 13	3.05	37 - 38	6.79	62 - 63	9.35
13 - 14	3.21	38 - 39	6.92	63 - 64	9.45
14 - 15	3.37	39 - 40	7.04	64 - 65	9.53
15 - 16	3.53	40 - 41	7.16	65 - 66	9.62
16 - 17	3.68	41 - 42	7.26	66 - 67	9.70
17 - 18	3.85	42 - 43	7.37	67 - 68	9.79
18 - 19	4.00	43 - 44	7.49	68 - 69	9.87
19 - 20	4.16	44 - 45	7.59	69 - 70	9.96
20 - 21	4.31	45 - 46	7.70	70 - 71	10.03
21 - 22	4.48	46 - 47	7.81	71 - 72	10.11
22 - 23	4.63	47 - 48	7.93	72 - 73	10.18
23 - 24	4.79	48 - 49	8.03	73 - 74	10.26
24 - 25	4.95	49 - 50	8.14	74 - 75	10.33
Each succeeding kilometre after 75 Kilometres increases at a rate of \$ 0.07 per tonne					

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PROVISIONAL SUMS

DIVISION 800

Item 806 - Overhaul - Common Excavation

Table 806-1 revised rates.

Table 806-1
OVERHAUL RATES
Common Excavation

• effective April 1, 2006 •

Haul Distance	Common Materials \$ per cubic metre
0 - 300 metres	freehaul
300 - 600 metres	0.61
600 - 900 metres	0.89
900 - 1200 metres	1.16
1200 - 1500 metres	1.43
1500 m - 2 km	1.70
2 - 3 km	1.97
3 - 4 km	2.20
4 - 5 km	2.44
5 - 6 km	2.66
Add for each succeeding kilometre	0.23

Item 807 - Overhaul - Unclassified Excavation

Table 807-1 revised rates

**Table 807-1
OVERHAUL RATES
Unclassified Excavation**

• effective April 1, 2006 •

Haul Distance	Unclassified Materials \$ per cubic metre
0 - 300 metres	freehaul
300 - 600 metres	0.73
600 - 900 metres	1.03
900 - 1200 metres	1.33
1200 - 1500 metres	1.60
1500 m - 2 km	1.89
2 - 3 km	2.16
3 - 4 km	2.42
4 - 5 km	2.66
5 - 6 km	2.91
Add for each succeeding kilometre	0.24

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PROVISIONAL SUMS

DIVISION 800

Item 808 - Overhaul - Solid Rock Excavation

Table 808-1 revised rates.

**Table 808-1
OVERHAUL RATES
Solid Rock Excavation**

• effective April 1, 2006 •

Haul Distance	Solid Rock \$ per cubic metre
0 - 300 metres	freehaul
300 - 600 metres	0.81
600 - 900 metres	1.14
900 - 1200 metres	1.47
1200 - 1500 metres	1.79
1500 m - 2 km	2.10
2 - 3 km	2.40
3 - 4 km	2.66
4 - 5 km	2.93
5 - 6 km	3.19
Add for each succeeding kilometre	0.27

Item 809 - Cold Weather Concreting

Deleted from Book

Item 810 - Fixed Rates

Table 810-1 added Item 261 for Smoothness retesting and the fixed rate for Smoothness Retesting was revised to \$100.00 from the previous \$200.00.

revised fixed rate for Item 261 - Appeal Testing Costs for Density to \$500.00 from previous \$300.00.

added fixed rate for Item 261 - Appeal Testing Costs for Air Voids at \$500.00.

added Note for Anti-stripping Admixture to bottom of Table as follows: If a tendered Quantity is included for an anti-stripping admixture, payment will be made at the fixed rate only if the admixture is required for the Design Mix Formula and is actually incorporated into the asphalt concrete placed on the Contract.

810.2.2 revised the articles as follows: The Fixed Rate shall include all time and Equipment required to complete the retesting.

Item 820 - Payment Adjustments

New Item incorporated into 2006 edition.

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STANDARD CONDITIONS

DIVISION 900

Item 906 - Work Schedule

- 906.1.2.1 added article as follows: Acceptance of the Initial Work Schedule will not alter the Contract requirements.
- 906.2.5.1 added article as follows: The critical path of the Work shall be indicated.

Item 908 - Supply of Materials

- 908.7 added heading and articles as follows: PARTIAL PAYMENT FOR MATERIALS
- .1 Upon written request by the Contractor and in accordance with section 4(2) of the Terms of Payment, the Owner will make partial payment to the Contractor for materials identified in the Basis of Payment of an Item and manufactured specifically for the Contract, delivered to the Work Site and stored in an condition, location and manner acceptable to the Engineer.
 - .1 The Owner may make partial payment for the materials prior to delivery, if the materials are acceptably stored at the supplier's yard.
 - .2 The partial payment will be a provisional unit price for the materials determined by dividing the purchase price (materials and freight per the supplier's invoice as provided to the Engineer) by the unit of measure for the Item or by calculating the percentage of the lump sum price of the Item equivalent to the purchase price. In the case of payment for materials stored per 908.7.1.1, the calculation would exclude the freight cost.
 - .3 In accordance with section 13(3) of the General Conditions, the Contractor shall be fully responsible for the care of the materials until placed and accepted in the Work, including repair or replacement at his own expense of any materials damaged or lost between the period of the partial payment and the incorporation of the materials into the Work.
 - .4 Partial payment may only be made in the fiscal year the material is to be incorporated in the Work for the specified Items as follows:
 - .1 Items 302, 304, 341, 342, 343, 344, 345, 348, 351, and 555.

Item 919 - Maintenance of Traffic Flow

- 919.1.2 revised article as follows: The Contractor is advised that any existing traffic pattern(s) or alternate traffic pattern(s) must be maintained and kept open, at a minimum of one traffic Lane throughout the work day and must be open to two-way traffic at the end of the work day.
- 919.1.3 revised article as follows: Surfaces subject to through traffic shall be maintained in a condition such that traffic can safely travel along it at the speed limit posted for the Work Area.

Item 921 - Construction Roads

- 921.1.2 added article as follows: The Contractor shall carry out the Work in conjunction with Item 948.
- 921.3 added heading and articles as follows: ENVIRONMENTAL PROTECTION
- .1 The Contractor shall ensure that his use of any existing private or public access roads does not cause sedimentation of any watercourses that cross such roads.
 - .2 On any new access roads constructed by or for the Contractor, natural water flows shall not be impeded, ditches shall not drain directly into watercourses, and erosion shall be controlled.
 - .3 A vegetated buffer zone shall be maintained between an access road and any watercourse, to the extent possible.

Item 922 - Pits and Quarries

- 922.1.7.1 added article as follows: Consolidated Overburden shall be stripped back a minimum distance of 2 m from the face; unconsolidated Overburden shall be stripped back a minimum distance of 7 m. from the face.
- 922.2 added heading and articles as follows: SULPHIDE-BEARING ROCK
- .1 Aggregate Base/Subbase, Shoulder Material and Random Riprap made from quarried rock shall have a total sulphur content of less than 0.3%; or a Neutralization Potential (NP) at least three times the Acid-generating Potential (AP), as represented by the Neutralization Potential Ratio, where $NPR = NP/AP \geq 3$.
 - .2 The NPR shall be determined by the Modified Sobec procedure (acid-base accounting), based on total sulphur.

Item 931 - Scales And Weighing Procedures

- General There are a number of revisions where Measurement Canada-Industry Canada or MCIC has been changed to Measurement Canada or MC.
- 931.1.1 revised article as follows: The Contractor shall supply all the scales necessary weighing devices for determining the Quantity when quantities for Contract Items that specify measurement by weighing for payment by the tonne or other mass unit.
- 931.2.3 Any material and/or placed in violation in excess of the maximum weights provision of the New Brunswick provisions of Regulation 201-67 2001-67, Vehicle Dimensions and Mass Regulation under the NB Motor Vehicle Act shall neither be measured for payment nor Act, will not be paid for or considered eligible for payment as part of the Work under any portion of the Contract Item of the Contract.

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- 931.2.6 The tare and gross weights of hauling units will shall be recorded typically to the nearest 10 kg, or in the case of a beam scale, to a maximum of the nearest 50 kg.
- 931.3.5.1.1 ~~An MCIC inspector will do the reinspection requested~~ Upon request by the Contractor to MC ~~to inspect scales rejected by MC on a control check, the MC inspector will advise the Contractor of his availability to do the reinspection. If the MC inspector is not available the Contractor shall arrange reinspection by a Private Scale Company. In either case, the reinspection will be as soon as practicable, at the at~~ The Contractor's expense.
- 931.3.10 A report (statement of accuracy) shall be completed by the Private Scale Company for each inspection and distributed as follows: the original to MCIC, ~~a copy to the Engineer, and a copy to be~~ the Engineer or posted in the scales.
- 931.4.4.1 Split weighing ~~shall be an~~ is acceptable only as a means of estimating the axle ~~and gross~~ weights.
- 931.4.5 ~~The approaches~~ Each approach to the scales ~~must be level and in~~ shall be maintained level at the same plane as the scale deck for a distance of ~~not less than three metres from either at least 3 m from the end of the scales deck.~~
- 931.5.1 ~~The~~ Testing of scales, regardless of the type of scale or the type or value of material weighed on them, shall require a minimum of 10 000 kg (20 000 lb) of test weights that have been certified by MCIC within the previous twelve months. Test results shall ~~not vary by more than the MCIC tolerance requirements in effect at the time of entering into the Contract~~ be within the applicable limit of error as specified by the Non-Automatic Weighing Device (NAWD) Specification.
- Table 931-1 Table has been revised as follows:

**Table 931-1
Approved Private Scale Companies**

AQTS	Fredericton, NB	506-458-6150
* All Weight Systems (2002) Inc.	Fredericton, NB	800-563-9344
Balance Experts	Sherbrooke, QC	819-566-5036
Balances & Equipments Culinaires Varietés Ltée	St-Isidore, NB	506-358-1999
Mettler-Toledo Inc.	Moncton, NB	800-663-5456
* Shore Weight Systems	Fredericton, NB	506-457-2645
Weigh-Tronix Canada	Fredericton	506-454-4010
	Dartmouth, NS	800-565-7889
	Quebec, QC	418-835-1672
Note: * identifies accredited Private Scale Companies that may perform initial inspection		

931.7.7 revised address and phone number as follows:

Measurement Canada
PO Box 2294 Station J
4180 Loch Lomond Road, Building 49
Saint John, N.B.
E2L 3V6 phone : 506-636-4591

Item 933 - Heavy Equipment

General Item has been completely rearranged and reworded to clarify the Department's practice and intent of the Item.

Item 936 - Compaction

936.2.1.1 added article as follows: Frozen materials shall not be incorporated into the Roadbed, and Roadbed materials shall not be placed on a frozen Roadbed surface without prior approval of the Engineer.

936.2.7 added articles as follows: A test strip may also be used to determine a control density and the number of passes of compaction equipment required to achieve this result.

- .1 The test strip shall be performed on a lift of placed material with density tests taken after each pass of a compactor until an insitu maximum dry density (control density) is achieved. This procedure will continue until the density result remains constant or decreases. The test strip determines the maximum number of passes, control density and field moisture content.
- .2 The compaction equipment to be used for test strips shall be able to produce a uniform density throughout the lift and have a minimum mass of 9 tonne and a vibratory capacity of at least 1500 vpm.
 - .1 Smaller compactors will be allowed for test strips at Culverts

Item 941 - Lines And Grades

941.5 added heading STRUCTURES and articles as follows:

- .1 The Engineer will provide pile layout, centreline of Roadway, centreline of bearings, and building line or working points as designated on the Plans for each major component of the Structure.
 - .1 The Contractor shall reference and maintain these marks and carry out additional layout as required.
- .2 The Engineer will provide benchmarks for grades which will be transferred to the concrete as construction progresses.
- .3 The Engineer will provide layout for foundation excavation, approach Roadway cuts and fills, and other Contract Items in accordance with this Item.

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Table 941-1 added note at the bottom of table as follows: Undercut means the surface at the specified depth below Subgrade in a cut or fill.

Item 946 - Work Progression

General replaced Item with the revised Item which was inserted as a Particular Specification in 2005 tenders.

Item 947 - Disposal Areas

947.1.2 added article as follows: In cases where soil or rock is suspected of being contaminated, the Contractor shall call the Stewardship Branch of ELG at (506) 453-7945 for advice.

947.1.3 added article as follows: For disposal of known contaminated soil or rock and construction or demolition waste produced during the Work, the Contractor shall apply to ELG for an "Approval To Operate".

Item 948 - Environmental Requirements

948.2.1.9.2 revised article as follows: ~~For soils~~ Soils with less than 25% Dust, hay mulch shall be placed on the slope up to the Subgrade Shoulder in accordance with Item 616.

948.2.1.13 revised as follows: If it is necessary to isolate the stream from the Work Area, the Contractor shall construct cofferdams consisting of, as a minimum, a layer of 6-mil clear ~~plastic sheet~~ polyethylene sandwiched between an outer (stream-side) wall of sandbags and an inner wall of earth fill.

948.2.1.16 revised as follows: ~~Any natural~~ Natural materials produced and/or supplied by excavation ~~either or~~ from pits and/or quarries shall not contain any friable, soluble or reactive minerals or other deleterious materials or conditions that would make the material prone to decomposition or disintegration, or present any environmental hazard, from the presence of the parent material or its by-products, when exposed to the natural elements after placement in the Work.

Item 956 - Construction Drawings And Calculations

956.1.1.12 revised article as follows: Shop Drawings for Culverts per 130.3, 131.3, 140.3, 141.3, and 142.3

956.1.4.1 revised article as follows: The Contractor represents by this review that: (1) the Contractor has determined and verified all field measurements and field construction conditions, or will do so; (2) the product requirements, catalogue numbers and similar data meet or exceed the specified requirements; and (3) that the Contractor has checked and co-ordinated each shop drawing with the requirements of the Work and the Contract Documents.

- 956.1.5 revised article as follows: No fabrication and/or construction shall commence on any aspect of the Work for which drawings and design calculations are required until acknowledgement of receipt is issued to the Contractor drawings are received and returned by the Engineer, as per 956.1.2, 956.1.3 and 956.1.4 unless approved otherwise by the Engineer.
- 956.1.9.1 revised article as follows: Welding within the Province of New Brunswick shall be performed by a welder holding a valid Qualified Welder's Certificate issued by the Province of New Brunswick or ~~shall be performed~~ by a welder certified in accordance with CSA W59.
- 956.1.9.2 revised article as follows: Welding outside the Province of New Brunswick shall be performed by a welder certified in accordance with CSA W59.
- 956.2.2 revised article as follows: The Contractor shall notify the ~~Owner~~ Engineer in writing of the name and licence or registration number of the Professional Engineer(s) who will be responsible for the design and construction of the Work, at least one month in advance of the construction of the temporary access structure.
- 956.2.3 revised article as follows: The Contractor ~~is not required to and shall not~~ submit drawings ~~to the Owner or Engineer, upon request,~~ for temporary access Structures.
- 956.3.2 revised article as follows: Timber, lumber and timber piles incorporated into temporary works other than temporary detour Structures shall be designed to meet the requirements of ~~CSA S6 or CSA 086 - Working Stress Design~~ CSA S269.1.

Item 957 - Falsework

- 957.3.6 revised article as follows: Falsework piling shall be removed ~~to the streambed, as a minimum,~~

Item 958 - Formwork

- 958.1.4.1 added article as follows: The Contractor shall not weld any form hangers, chairs, bar supports, etc. to the flanges or webs of steel girders.

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APPENDIX

INSURANCE SCHEDULE "E"

Insurance Schedule "E"

Added under **General Items** the following:

- 2) The Contractor shall provide the Department with proof of coverage in the form of a certificate issued by Workplace Health, Safety and Compensation Commission (WHSCC) of New Brunswick identifying the contractor as registered and in good standing with WHSCC. Such proof of coverage will be provided to the Department in conjunction with the execution of the contract as well as is stipulated under the Terms of Payment A of the contract.

Deleted under **Part A - Course of Construction** the following:

- d) a maximum deductible of \$2500 in all events to be borne by the Contractor

Revised under **Part B - Commercial General Liability** the following:

- o) Liability Limits of not less than ~~\$1,000,000~~ \$2,000,000 or as currently carried by the Contractor whichever is greater

Revised under **Part C - Automobile Liability** the following:

- b) Limits of Liability of not less than ~~\$1,000,000~~ \$2,000,000 or as currently carried by the Contractor whichever is greater

Deleted under **COURSE OF CONSTRUCTION (BUILDERS RISK)** the following:

- \$2500 deductible or as specified (Item d)

Revised under **COMMERCIAL GENERAL LIABILITY** the following:

- Limit of Liability of not less than ~~\$1,000,000~~ \$2,000,000 or as currently carried by the contractor whichever is greater (Item o)

Revised under **AUTOMOBILE LIABILITY** the following:

Limit of Liability of not less than ~~\$1,000,000~~ \$2,000,000 or as currently carried by the contractor whichever is greater

